PUBLIC NOTICE

APPROVAL OF COMPREHENSIVE PERFORMANCE TEST PLAN AND NOTIFICATION OF TEST BURN

HEXION SPECIALTY CHEMICALS ORGANIC CHLORIDE INCINERATORS NCIN-1 AND NCIN-2

PERMIT NUMBER LAD 980 622 104 / ACTIVITY NUMBER PER20080005 /AI 87883 ST. CHARLES PARISH, LOUISIANA

The Louisiana Department of Environmental Quality (LDEQ has reviewed the Comprehensive Performance Test (CPT) Plan for the Organic Chloride Incinerators NCIN-1 and NCIN-2, for **Hexion Specialty Chemicals, 16122 River Road, Post Office Box 10, Norco, LA 70079 in St. Charles Parish**.

Hexion Specialty Chemicals will conduct the test burn, currently scheduled to begin **September 2, 2009**, in accordance with the approved CPT Plan. The CPT will be completed within sixty (60) days after the date of commencement, in accordance with 40 CFR 63.1207(d)(3). Hexion Specialty Chemicals will be performing the CPT to confirm compliance of the Organic Chloride Incinerators NCIN-1 and NCIN-2 with the Hazardous Waste Combustor (HWC) Maximum Achievable Control Technology (MACT) performance and emission standards of 40 Code of Federal Regulations (CFR) 63 Subpart EEE. As required, the Continuous Monitoring Systems Performance Evaluation Test (CMS PET) will be performed prior to the CPT.

In the case of unanticipated delays, the time period will be dictated by the nature of the delay and will be discussed with LDEQ.

The CPT plan describes how the test burn will be conducted to meet the 40 CFR 63 Subpart EEE regulatory requirements. The results accumulated from the test burn will be used to **confirm compliance of the Organic Chloride Incinerators NCIN-1 and NCIN-2 with the HWC MACT performance and emission standards.**

A copy of the approved test plan is available for review and copying (all documents copied will be subject to a $0.25 charge per copy page) at the LDEQ Public Records Center, Room 1-127, 602 North 5th Street, Baton Rouge, Louisiana. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday – Friday, (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at www.deq.louisiana.gov**.

Additional copies are available for review at the St Charles Parish Library, Norco Branch, 197 Good Hope Street, Norco, LA 70079 and at the St. Charles Parish Library, East Regional Branch,100 River Oaks Drive, Destrehan, LA 70047.

Individuals or public interest groups who would like to obtain additional information regarding this scheduled test burn should address MICHAEL GUIDRY, HEXION SPECIALTY CHEMICALS, 16122 River Road, Post Office Box 10, Norco, LA 70079, (504) 472-6585; or JILL MARTIN, LDEQ, Office of Environmental Services (OES), Waste Permits Division, Post Office Box 4313, Baton Rouge, Louisiana 70821-4313, (225) 219-3455.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton

Rouge, LA 70821-4313, by email at deqmaillistrequest@la.gov or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

Permit public notices including electronic access to the approved test plan can be viewed at the LDEQ permits public notice webpage at www.deq.louisiana.gov/apps/pubNotice/default.asp and general information related to the public participation in permitting activities can be viewed at www.deq.louisiana.gov/portal/tabid/2198/Default.aspx.

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at www.doa.louisiana.gov/oes/listservpage/ldeq_pn_listserv.htm

All correspondence should specify AI Number 87883, Permit Number LAD 980 622 104, and Activity Number PER20080005.

Scheduled Publication Date: July 2, 2009

HEXION™
Specialty Chemicals

Hexion Specialty Chemicals, Inc.
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MAIN FILE

original to TOHID
copy to Engl Caffery

May 28, 2009

Mr. Tom Harris
Administrator, Waste Permits Division
Louisiana Department of Environmental Quality
P.O. Box 4313
Baton Rouge, Louisiana 70821-4313

Reference: Revised HWC MACT Comprehensive Performance Test Plan for the Liquid and Vapor Incinerators NCIN-1 and NCIN-2
Hexion Specialty Chemicals
16122 River Road
Norco, Louisiana 70079
EPA ID No. LAD 980 622 104
Agency Interest No. 87883 ✓

Dear Mr. Harris,

Enclosed please find the revised portions of the Comprehensive Performance Test (CPT) Plan and Quality Assurance Project Plan (QAPP) for the liquid and vapor incinerators, NCIN-1 and NCIN-2, located at the Norco, Louisiana facility. These revisions are submitted in response to LDEQ requests for revision resulting from a conference call on April 21, 2009. Hexion welcomes comments at LDEQ's earliest convenience.

The HWC MACT rule at 63.1207(e)(2) requires a 60-day public notice of the planned test date and availability of the approved test plan for review. The planned test start date is August 24, 2009. Hexion respectfully requests agency consideration of these regulatory deadlines to allow for timely contracting and scheduling of the CPT.

If you have any questions or comments, you may contact me by phone at (504) 472-6563 or e-mail at katherine.ricks@hexion.com.

Sincerely,

Katie R Ricks

Katie R. Ricks
EHS Manager
Hexion Specialty Chemicals

DEQ - OES
2009 JUN -2 PM 1:18

Attachments: *CPT/QAPP Revision Summary*
CPT Plan Revised Pages
QAPP Revised Pages

cc:

U.S. Environmental Protection Agency Region 6
Attn: Kishor Fruitwala
1445 Ross Avenue, Suite 1200
Mail Code:6PDA
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Mr. Donelson R. Caffery, Jr., P.E.
Hazardous Waste Engineering Group
Louisiana Department of Environmental Quality
P.O. Box 4313
Baton Rouge, LA 70821-4313

CPT / QAPP Revision Summary

Hexion CPT Plan and QAPP Changes

Changed Page(s)	Change	Action
CPT Plan pages 4-5	Changed text to note low temperature THC demonstration to be performed on NCIN-2 and page shift	Replace corresponding pages
CPT Plan page 6	Corrected list of approved AMA items	Replace corresponding page
CPT Plan pages 7-10	Table 1-1: Corrected footnotes	Replace corresponding pages
CPT Plan pages 23-24	Modified AWFCO testing frequency discussion in Section 3.6 and page shift	Replace corresponding pages
CPT Plan page 31	Table 3-1: Added footnotes	Replace corresponding page
CPT Plan pages 46-47	Table 4-1: Changes to note low temperature THC demonstration to be performed on NCIN-2, and changed AWFCO to "yes" for ash and metals feed rates. Also, modified some test targets.	Replace corresponding pages
CPT Plan page 55	Table 5-1: Removed unnecessary footnotes	Replace corresponding page
CPT Plan pages 67-74	Added/Modified text on monitoring of metals feed rates and page shift	Replace corresponding pages
CPT Plan pages 75-76	Table 7-1: Changed AWFCO to "yes" for ash and metals feed rates and modified some proposed limits.	Replace corresponding pages
CPT Plan page 77	Table 7-2: Changed test AWFCO set points to be consistent with test targets noted in modified Table 4-1.	Replace corresponding page
QAPP pages 2-4	Table of contents changes and page shift due to additions/changes in Section 4.0	Replace corresponding pages
QAPP pages 13-15	Changed text to note low temperature HC demonstration to be performed on NCIN-2 and page shift	Replace corresponding pages
QAPP pages 16-19	Table 3-1: Corrected footnotes (same as CPT plan Table 1-1)	Replace corresponding pages
QAPP page 20	Table 3-2: Removed unnecessary footnotes (same as CPT plan Table 5-1)	Replace corresponding page
QAPP page 23-28	Section 4 QAO changes and addition of spiking contractor.	Replace corresponding pages

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CPT Revised Pages

This CPT plan is based on submitting the confirmatory test PCDD/PCDF emissions data as data-in-lieu for FRS compliance. Hexion expects the FRS CPT will be conducted in 2009. If the CPT plan approval timing allows, the PCDD/PCDF emissions confirmatory test and FRS CPT may be performed concurrently.

1.6 TEST OPERATING PROTOCOL

The combustion and energy recovery portions of NCIN-1 and NCIN-2 are identical. The downstream HCl recovery and APC systems of NCIN-1 and NCIN-2 differ as described in Section 3.0 of the CPT plan. Both incineration systems treat the same liquid waste and vent vapor streams. The differences between the HCl recovery and APC systems impact the maximum liquid waste treatment capabilities between the two incineration systems. Specifically, the HCl recovery and acid gas control capacities NCIN-1 and NCIN-2 differ.

Hexion proposes demonstrating FRS compliance while operating NCIN-1 and NCIN-2 as nearly as possible to the conditions demonstrated during the 2004 CPT. The following test protocol is proposed:

- NCIN-2 minimum combustion temperature/maximum combustion gas velocity CO/THC demonstration test: This test will reaffirm the adequacy of the current minimum combustion temperature minimum limit for both NCIN-1 and NCIN-2. This test will also demonstrate compliance with HWC MACT emissions standards for CO and THC while feeding hazardous waste and operating at minimum combustion temperature.

- NCIN-1 and NCIN-2 maximum waste feed rate test: This test will be performed on each unit to demonstrate respective compliance with HWC MACT CO, THC, PM, HCl/Cl_2, and metals emissions, while feeding liquid hazardous waste at maximum rate. These tests will reaffirm the adequacy of the current individual maximum waste feed rate and maximum combustion gas velocity limits for NCIN-1 and NCIN-2. These tests will establish respective maximum ash, chloride, and metals feed rate limits for each unit.

These test conditions will include the following sampling and analyses:

<u>NCIN-2 Minimum Combustion Temperature CO/THC Demonstration Condition</u>

- Stack gas THC concentration using a temporary CEM according to the protocols in 40 CFR 60 Appendix A, Method 25A.
- Stack gas CO and O_2 concentrations by installed continuous emissions monitors (CEMs) according to the protocols in 40 CFR 60, Appendix B, Performance Specification 4B.

<u>NCIN-1 and NCIN-2 Maximum Waste Feed Rate Conditions (Maximum Ash, Chloride and Metals)</u>

- Liquid waste feed for heating value, viscosity, density, ash content, total chloride, and the HWC MACT metals [arsenic (As), beryllium (Be), cadmium (Cd), total chromium (Cr), lead (Pb) and mercury (Hg)] analyses
- Waste feed spiking of the ash surrogate and two metals (chromium and lead)
- Stack gas for particulate, HCl, and Cl_2 using a 40 CFR 60, Appendix A, Method 26A sampling train

- Stack gas for As, Be, Cd, total Cr and Pb using a 40 CFR 60, Appendix A, Method 29 sampling train.
- Stack gas THC concentration using a temporary CEM according to the protocols in 40 CFR 60 Appendix A, Method 25A.
- Stack gas CO and O_2 concentrations by installed continuous emissions monitors (CEMs) according to the protocols in 40 CFR 60, Appendix B, Performance Specification 4B.

The CPT is designed to demonstrate range of worst-case operation of the incinerators. During all testing, the incinerators will be operated treating allyl chloride heavy ends (ACHE) liquid waste.

During the minimum temperature CO/THC demonstration, NCIN-2 will be operated treating a combination of liquid waste and vapor vents. The minimum combustion temperature demonstration will show that the HWC MACT CO and THC emissions standards are being met by NCIN-1 and NCIN-2 at the current limit.

During the respective maximum liquid waste feed/maximum combustion gas velocity test conditions of NCIN-1 and NCIN-2, only liquid waste will be treated; all vapor vents will be directed to the incinerator not being tested. The maximum chlorine/chloride feed rates demonstrated during the respective capacity tests will show each incinerator's APC system's capabilities in meeting the HCl/Cl_2 emissions performance standard. During subsequent HWC MACT operation, the incinerators may be operated treating only liquid wastes, treating only vapor vents, or treating a combination of liquid wastes and vapor vents. To accommodate treatment of the vapor vents, the incinerators are normally operated at lower liquid waste feed rates. The maximum waste feed rate/maximum combustion gas velocity demonstrations will show that HCl/Cl_2 emissions standard is being met by NCIN-1 and NCIN-2 at the demonstrated maximum feed rates. During subsequent HWC MACT operation of the incineration systems, the total chlorine/chloride feed rates demonstrated during the respective capacity tests will not be exceeded by any combination of liquid waste and vent vapors.

The respective maximum liquid waste feed rate/maximum combustion gas velocity condition tests will also demonstrate each incinerator's APC system's capability to control particulate and metals emissions to the HWC MACT performance standards when ash and metals feed rates are at their maximums. Therefore, the ash and metals feed rate limits established via the respective tests will not be exceeded during subsequent HWC MACT operation.

1.7 DEVELOPMENT OF OPERATING LIMITS

Table 1-1 shows how the test results are used to develop the OPLs to assure ongoing compliance with the HWC MACT emissions limits and operating standards. The HWC MACT prescriptively establishes process control limits for the combustion and APC system operation at 40 CFR 63.1209 (j) through (p). In accordance with 40 CFR 63.1209(g) and 63.8(f) [MACT *General Provisions*], an Alternative Monitoring Application (AMA) was included with the original CPT plan submitted in November 2001. The AMA proposed OPLs for some of the HWC MACT specified limits that provide equivalent or better assurance of compliance with the HWC MACT performance standards. The details of the AMA were negotiated and finalized in 2004. The HWC MACT monitoring requirement waived by EPA is minimum differential pressure across low energy wet scrubbers. The OPLs proposed in this CPT plan are consistent with the previously EPA-approved AMA.

1.8 REFERENCE DOCUMENTS

Reference documents that have been used in developing this test plan include the following:

- EPA, "Guidance on Setting Permit Conditions and Reporting Trial Burn Results", Volume II of the Hazardous Waste Guidance Series", EPA/625/6-89/019, January 1989.
- National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors, 40 CFR 63 Subpart EEE, October 12, 2005.
- Rules and Regulations of the State of Louisiana applicable to operators of hazardous waste incinerators [LAC 33:V.3111].
- American Society for Testing and Materials, "Annual Book of ASTM Standards", latest annual edition.
- EPA, "New Source Performance Standards, Test Methods and Procedures," Appendix A, 40 CFR 60.
- EPA, "Test Methods for Evaluating Solid Wastes Physical/Chemical Methods (SW-846)", Third Edition, 1986 and updates.
- EPA Requirements for Quality Assurance Project Plans (EPA QA/R-5 EPA/240/B-01/003), March 2001
- Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans (QAMS-005/80)
- Quality Assurance/Quality Control (QA/QC) Procedures for Hazardous Waste Incineration, EPA/625/6-89/023, January 1990.

1.9 TEST PLAN ORGANIZATION

This test plan is prepared in a chapter format that includes HWC MACT regulatory citations where appropriate. The major sections of the test plan are as follows:

- Section 1.0 - Introduction
- Section 2.0 - Feed Stream Description
- Section 3.0 - Engineering Description
- Section 4.0 - Test Design and Protocol
- Section 5.0 - Sampling, Analysis, and Monitoring Procedures
- Section 6.0 - Test Schedule
- Section 7.0 - Operating Permit Objectives
- Section 8.0 - Test Reporting.

Table 1-1. HWC MACT Standards Compliance of NCIN-1 and NCIN-2

LIMIT	REGULATORY CITATION - 63.1209	HOW ESTABLISHED	AVERAGING TIME	ASSOCIATED STANDARD						
				DRE	Dioxins/ Furans	Hg	SVM	LVM	PM	HCl/Cl_2
LIMITS ASSOCIATED WITH THE COMBUSTION UNIT										
Minimum combustion chamber temperature	(j)(1), (k)(2)	Average of test run averages	Hourly rolling average	DILO[c]	DILO[c,d]					
Maximum combustion chamber pressure	(p)	Lower than ambient pressure	Instantaneous	For control of fugitive emissions - no quantified limits established						
Maximum stack gas flow rate	(j)(2), (k)(3), (m)(2), (n)(5), (o)(2)	Average of the maximum hourly rolling averages	Hourly rolling average	DILO[c]	DILO[c,d]		DILO[c d]	DILO[c d]	DILO[c]	DILO[c]
Operation of waste firing system[a]	(j)(4)	Average of the maximum hourly rolling averages	Hourly rolling average	NA						
LIMITS ASSOCIATED WITH THE INCINERATOR FEED STREAMS										
Maximum hazardous waste feed rate	(j)(3), (k)(4), Preamble 9/30/99 Rule, page 52937	Maximum pumpable and maximum total as the average of the maximum rolling hour averages	Hourly rolling average	DILO[c]	DILO[c,d]					
Maximum feed rate of mercury	(l)(1)	Average of the average hourly rolling averages (may be extrapolated upward)	12-hour rolling average			MTEC				
Maximum feed rate of SVM	(n)(2)(A)	Average of the average hourly rolling averages (may be extrapolated upward)	12-hour rolling average				Max. Feed Rate Test			

Table 1-1. HWC MACT Standards Compliance of NCIN-1 and NCIN-2

LIMIT	REGULATORY CITATION - 63.1209	HOW ESTABLISHED	AVERAGING TIME	ASSOCIATED STANDARD						
				DRE	Dioxins/ Furans	Hg	SVM	LVM	PM	HCl/Cl_2
Maximum feed rate of LVM[a]	(n)(2)(B), (n)(2)(C)	Average of the average hourly rolling averages (may be extrapolated upward)	12-hour rolling average					Max. Feed Rate Test		
Maximum feed rate of total chlorine and chloride	(n)(4), (o)(1)	Average of the average hourly rolling averages	12-hour rolling average				Max. Feed Rate Test	Max. Feed Rate Test		Max. Feed Rate Test
Maximum ash feed rate	(m)(3), Preamble 9/30/99 Rule, page 52954 and 52955	Average of the average hourly averages	12-hour rolling average						Max. Feed Rate Test	
LIMITS ASSOCIATED WITH WET SCRUBBERS										
Minimum pressure drop across low energy wet scrubbers[c]	(o)(3)(ii)	Manufacturer's specifications	Hourly rolling average			MTEC				AMA[e]
Minimum liquid feed pressure to a low energy wet scrubber	(o)(3)(iii)	Manufacturer's specifications	Hourly rolling average			MTEC				Max. Feed Rate Test
Maximum solids content of scrubber water via CMS or minimum blowdown rate and either minimum scrubber tank volume or level	(m)(1)(i)(B)	Average of the test run averages	Hourly rolling average				Max. Feed Rate Test[f]	Max. Feed Rate Test[f]	Max. Feed Rate Test[f]	

Table 1-1. HWC MACT Standards Compliance of NCIN-1 and NCIN-2

LIMIT	REGULATORY CITATION - 63.1209	HOW ESTABLISHED	AVERAGING TIME	ASSOCIATED STANDARD						
				DRE	Dioxins/ Furans	Hg	SVM	LVM	PM	HCl/Cl_2
Minimum Liquid to Gas Ratio (L/G), or minimum liquid and maximum flue gas flow rates	(l)(2), (m)(1)(C), (o)(3)(v)	Average of the test run averages	Hourly rolling average			MTEC				Max. Feed Rate Test
Minimum scrubber water pH	(o)(3)(iv)	Average of the test run averages	Hourly rolling average							Max. Feed Rate Test
LIMITS ASSOCIATED WITH CATALYTIC OXIDIZER SYSTEMS										
Minimum flue gas temperature at entrance of catalytic oxidizer	(k)(8)(i)	Average of the test run averages	Hourly rolling average		DILO[c,d]					
Maximum in-use time of catalyst	(k)(8)(ii)	Manufacturer's specifications	Defined service time		NA					
Catalyst Replacement Specification	(k)(8)(iii)	Same or better as used during CPT for select parameters	N/A		NA					
Maximum flue gas temperature at entrance of catalytic oxidizer	(k)(8)(iv)	Manufacturer's specifications	Hourly rolling average		NA					

Table 1-1. HWC MACT Standards Compliance of NCIN-1 and NCIN-2

Notes:

a) Dual LVM feed rate limits for pumpable and total feed streams are not required if the total LVM feed rate limit is based solely on pumpable feed streams
b) Examples of low energy wet scrubbers include spray towers, packed beds, or tray towers
c) Limit based on 2004 CPT test results submitted as data-in-lieu in accordance with 40 CFR 63.1206(b)(7) and 63.1207(c)(2)(iv) .
d) PCDD/PCDF emissions from the planned March 2009 confirmatory testing will be submitted as data-in-lieu.
<u>e) The Alternative Monitoring Application (AMA) originally submitted in 2001 in accordance with 40 CFR 63.1209(g) and 63.8(f) requested waiving of the minimum scrubber differential pressure limit. This waiver was approved by EPA contingent upon continuous monitoring limits for minimum liquid feed pressure and minimum L/G.</u>
<u>f) Hexion complies with the maximum solids content limit via continuous monitoring and control of the scrubber water conductivity.</u>

g) Examples include waste atomization media pressure.

DILO – Data-in-lieu-of

MTEC – Maximum Theoretical Emissions Concentration reached. An alarm set point is intended to provide the operator with sufficient warning to acknowledge the alarm and to make operational adjustments to avoid an AWFCO.

The control system includes pre-AWFCO set points. These pre-AWFCO set points are at values above the minimum or below the maximum permitted limit values. When a pre-AWFCO set point is reached, the control system initiates an audible alarm, a visual warning on the operator's control screen, and stops liquid waste feed. The operator must acknowledge the alarm and make operational adjustments to bring the monitored parameter within the pre-AWFCO set point limit before liquid waste feed can be resumed.

When a permitted limit is reached, the control system initiates an audible alarm, a visual warning on the operator's control screen, and an AWFCO. The operator must acknowledge the AWFCO and make operational adjustments to bring the monitored parameter within the permitted and pre-AWFCO set point limits before liquid waste feed can be resumed. Tables 3-2 and 3-3 list the instruments associated with the NCIN-1 and NCIN-2 AWFCO systems.

During NCIN-1 and NCIN-2 operations, the AWFCO systems of each unit are separately tested monthly. Waste feed must be suspended to conduct the AWFCO system testing, unduly restricting waste treatment operations. Therefore, monthly rather than weekly testing is performed. AWFCO system testing is documented in the operating record. AWFCO system testing is via the following or an equivalent method. The AWFCO system is activated by an electronic signal from the control system to verify that the control loop and physical cutoff system is working properly. Waste feeds to the incinerator are discontinued and auxiliary fuel is used to maintain the temperature in the firebox. _The monitoring parameters listed in Table 3-1 are then checked for electronic operation and the associated software alarm levels are verified through documentation. Any malfunction is rectified before liquid waste feed is resumed.

3.7 HCl ABSORBERS

Integral to NCIN-1 and NCIN-2 are hydrogen chloride (HCl) absorbers. The HCl absorbers of both incinerators are production units designed and operated to recover HCl from the NCIN-1 and NCIN-2 combustion gases to produce 10 wt% aqueous HCl. The recovered HCl is used for neutralization in other Hexion operations or similar use by others. The HCl absorbers are followed by caustic scrubbers to control HCl/Cl_2 not recovered by the absorber. Because the NCIN-1 and NCIN-2 absorbers' configurations differ slightly, they are described separately in the following sections.

3.7.1 NCIN-1 HCl Absorber

The NCIN-1 HCl absorber modifications were completed in July 2008. The former NCIN-1 HCl absorber consisted of an in-line adiabatic quench section and an acid absorber section (lower two packed sections) in a single column shared with the caustic scrubber (upper packed section). The modified NCIN-1 HCl absorber consists of an in-line adiabatic quench section and two acid absorber sections in a single column; the former caustic scrubber is modified and re-plumbed to become an expanded HCl absorber section. A new and separate caustic scrubber (discussed later) is added downstream of the modified absorber.

The quench section consists of two in-line spray nozzles located in the duct at the gas inlet of the HCl absorber. The quench section measures 5 ft- 2 in diameter x 8 ft- 6 in long. In the quench section, recycled aqueous HCl adiabatically saturates and cools the combustion gas from the flue gas cooler before it enters the absorber.

The entire absorber column is 8 ft inside diameter x 46 ft tall containing three packed sections. The initial HCl absorber section is comprised of the lower 30 ft of the column and includes two 7 ft high packed sections. The second HCl absorber section is located above the initial HCl absorber section and comprises the top 16 ft of the column. The second absorber section is 6 ft-9 in. high and packed with polypropylene packing. The HCl absorber packed sections are filled with polypropylene packing.

The HCl-laden combustion gas from the flue gas cooler passes through the quench section, enters the initial absorber column, and flows upward through the two absorber packed sections. In the initial HCl absorber section, the combustion gas is contacted with re-circulated aqueous HCl. The re-circulated HCl stream is supplied by a pump which takes liquid from the sump at the base of the initial HCl absorber section and reintroduces it to the absorber at three points: 1) through the two in-line spray nozzles in the quench section, 2) to the top of the lower packed section of the initial HCl absorber section, 3) to the top of the upper packed section of the initial HCl absorber section.

The combustion gas from initial HCl absorber section enters the second HCl absorber section, and flows upward through the packed section. In the second HCl absorber section, the combustion gas is contacted with soft water introduced to the top of the packed section. The overflow from second HCl absorber section gravity flows to the initial HCl absorber section.

The liquid level in the bottom or sump of the HCl absorber is operated on level control. This level controller actuates a valve that controls the flow rate of makeup water to the absorber. The blowdown from the absorber sump is controlled by the acid concentration. Blowdown and makeup are controlled to produce ~10% HCl.

3.7.2 NCIN-2 HCl Absorber

The NCIN-2 HCl absorber consists of an in-line quench section and an acid absorber column. The quench section consists of two in-line spray nozzles located in the duct at the gas inlet of the acid absorber column. In the quench section, recycled aqueous HCl sprays saturate and cool the combustion gas from the flue gas cooler before it enters the absorber column. The absorber column is 7 ft inside

Table 3-1. AWFCO Parameters

Operational Parameter	Averaging Period
Maximum liquid waste feed rate	Hourly RA
Maximum total chloride feed rate	12-Hour RA
Minimum combustion temperature	Hourly RA
Maximum combustion chamber pressure	None; 1-second delay
Minimum caustic scrubber recycle flow [b]	Hourly RA
Minimum caustic scrubber recycle pH	Hourly RA
Minimum caustic scrubber recycle pressure	Hourly RA
Maximum caustic scrubber recycle conductivity	12-Hour RA
Minimum CATOX inlet gas temperature	Hourly RA
Maximum CATOX inlet gas temperature	Hourly RA
Maximum stack gas flow	Hourly RA
Maximum stack gas CO concentration [a]	Hourly RA

Notes:

[a] Dry basis corrected to 7% oxygen.

[b] Hourly limit for minimum liquid to gas ratio (L/G) compliance.

AWFCO - automatic waste feed cutoff

RA - rolling average

Table 4-1. CPT Target Operating Conditions

Operational Parameter	CPT Target Operating Value (Note a)			AWFCO	Averaging Period
	NCIN-2 Min. Temp. Demo. Test	NCIN-1 Max. Feed Rate Test	NCIN-2 Max. Feed Rate Test		
Group 1 Parameters					
Maximum liquid waste feed rate (lb/hr)	N/A	8,343	7,229	Yes	Hourly Rolling Average
Maximum total chloride feed rate (lb/hr)	N/A	5,256	4,554	Yes	12-Hour Rolling Average
Maximum ash feed rate (lb/hr)	N/A	5.0	5.0	Yes	12-Hour Rolling Average
Maximum mercury (Hg) feed rate (g/hr)	N/A	1.48	1.48	Yes	12-Hour Rolling Average MTEC
Maximum total semivolatile metals (SVM) feed rate (g/hr)	N/A	20	20	Yes	12-Hour Rolling Average
Maximum total low volatility metals (LVM) feed rate (g/hr)	N/A	20	20	Yes	12-Hour Rolling Average
Minimum combustion temperature (° F)	1,718	N/A	N/A	Yes	Hourly Rolling Average
Minimum caustic scrubber recycle flow (gpm) (minimum L/G)	410 per scrubber	410	410 per scrubber	Yes	Hourly Rolling Average
Minimum caustic scrubber recycle pH	7.2	7.2	7.2	Yes	Hourly Rolling Average
Maximum caustic scrubber recycle conductivity (µS/cm)	NA	23,000	23,000	Yes	12-Hour Rolling Average
Minimum CATOX inlet gas temperature (° F)	330	330	330	Yes	Hourly Rolling Average
Maximum stack gas flow (mscfm)	14.56	17.19	14.56	Yes	Hourly Rolling Average
Group 2 Parameters					
Maximum combustion chamber pressure (inwc)	0.0	0.0	0.0	Yes	None; 1-second delay
Maximum stack gas CO conc. (ppmv, dry @ 7% O_2)	100	100	100	Yes	Hourly Rolling Average
Maximum stack gas HC conc. (ppmv, dry @ 7% O_2) (Note b)	10	10	10	Yes	Hourly Rolling Average
Group 3 Parameters					
Minimum waste atomization steam pressure (psig)	25	25	25	No	None; checked daily
Minimum caustic scrubber recycle pressure (psig)	Note c	10	10	Yes	Hourly Rolling Average
Maximum CATOX inlet gas temperature (° F)	700	700	700	Yes	Hourly Rolling Average

Table 4-1. CPT Target Operating Conditions (continued)

Notes

[a] Refer to Table 7-2 for testing setpoints for AWFCO parameters.
[b] HC compliance to be demonstrated using a temporary CEM as allowed by 40 CFR 63.1206(b)(6).
[c] Pressure target consistent with unit tested; see maximum feed rate demonstration value.

AWFCO - automatic waste feed cutoff
TBD -To be determined
N/A-Not applicable

Table 5-1. Minimum Temperature Demonstration Test Sampling and Analysis

Sample Name	Sampling Location/ Access	Sampling Equipment	Sampling Reference Method	Sample Size/Frequency	Analytical Parameters	Analytical Reference Method
Stack Gas	CEMS Port	Installed CO and O_2 CEMS	40 CFR 60 Appendix B Specification 4B	Continuous for each one hour test run	CO and O_2	40 CFR 60 Appendix B Specification 4B
Stack Gas	Non-Isokinetic Port	Temporary THC CEMS	40 CFR 60 Appendix A Method 25A	Continuous for each one hour test run	THC	40 CFR 60 Appendix A Method 25A

$1\ g/10^6\ \mu g$	=	convert micrograms to grams

The total mercury concentration limit for each unit should be expressed as a 12-hour rolling average. Records of waste feed analyses, and the electronic waste feed operational data, will be maintained to demonstrate compliance with the mercury mass feed rate limits for NCIN-1 and NCIN-2.

7.3.1.5 Maximum Semivolatile Metals Feed Rate [40 CFR 63.1209(n)(2)(i)(A), (ii)]

Hexion will feed waste normally treated in NCIN-1 and NCIN-2 unit during the testing. Hexion will spike lead (Pb) as a surrogate metal for the SVM group. The wastes may contain some native amounts of SVM as expected during routine facility operation. Waste feed analyses and waste feed rates will be used to assess the native feed rates of SVM (Cd and Pb). For CPT determinations, non-detects for SVM in the waste feeds will be considered to be zero. However, if any SVM is at detectable levels in the liquid waste feed stream during the capacity testing, the waste stream feed rate and the SVM concentration will be used to determine the feed rate of the native portion of the SVM. The native portion, if any, will be added to the spiked metal feed rate to determine the total feed rate of SVM.

Because the CPT target feed rate for SVM is sufficient to encompass the liquid waste analysis results and potential maximum waste feed rates, Hexion proposes that continuous calculation of the SVM feed rates by the incineration control systems is unnecessary. Provided that the SVM emissions measured during the capacity tests corrected to 7 percent O_2 are less than the HWC MACT standard of 230 μg/dscm, Hexion proposes that the final permitted mass feed rate limits for SVM should be set at the respective test demonstrated SVM mass feed rates for NCIN-1 and NCIN-2. Potential extrapolation of the test demonstrated SVM feed rates is discussed in Section 7.3.4. For SVM, this extrapolation will be calculated as follows:

$$EFR_{SVM} = [(WFR \times (C_{Cd} + C_{Pb})) + SR_{Pb}] \times (230\ \mu g/m^3/SC_{SVM})$$

where:

EFR_{SVM}	=	extrapolated SVM allowable feed rate
WFR	=	liquid waste feed rate
C_{Cd}	=	native waste feed concentration of cadmium
C_{Pb}	=	native waste feed concentration of lead
SR_{Pb}	=	spike rate of lead
$230\ \mu g/m^3$	=	HWC MACT SVM
SC_{SVM}	=	three-run SVM average stack gas concentration corrected to 7% oxygen

The maximum SVM allowable mass feed rate will be calculated as noted above. The total SVM feed rate limit for each unit should be expressed as a 12-hour rolling average, equal to the extrapolated average of the average SVM feed rate during the three runs of the respective capacity tests. Records of waste feed analyses, and the electronic waste feed operational data, will be maintained to demonstrate compliance with the SVM feed rate limits.

7.3.1.6 Maximum Low Volatility Metals Feed Rates [40 CFR 63.1209(n)(2)(i)(B)-(C), (ii)]

Hexion will feed waste normally treated in NCIN-1 and NCIN-2 during the testing. Hexion will spike chromium (Cr) as a surrogate metal for the LVM group (As, Be and Cr). The liquid waste feed may contain some native amounts of LVM as expected during routine facility operation. Waste feed analyses and waste feed rates will be used to assess the native feed rates of LVM. For CPT determinations, non-detects for LVM in the waste feeds will be considered to be zero. However, if any LVM is at detectable levels in the liquid waste feed during the capacity testing, the liquid waste stream feed rate and the LVM concentration will be used to determine the feed rate of the native portion of the LVM. The native portion, if any, will be added to the spiked metal feed rate to determine the total feed rate of the LVM.

Because the CPT target feed rate for LVM is sufficient to encompass the liquid waste analysis results and potential maximum waste feed rates, Hexion proposes that continuous calculation of the LVM feed rates by the incineration control systems is unnecessary. Provided that the LVM emissions measured during the capacity tests corrected to 7 percent O_2 are less than the HWC MACT standard of 92 μg/dscm, Hexion proposes that the final permitted mass feed rate limits for LVM should be set at the respective test demonstrated LVM mass feed rates for NCIN-1 and NCIN-2. Potential extrapolation of the test demonstrated LVM feed rates is discussed in Section 7.3.4. For LVM, this extrapolation will be calculated as follows:

$$EFR_{LVM} = [(WFR \times (C_{As} + C_{Be} + C_{Cr}) + SR_{Cr}] \times (92\ \mu g/m^3/SC_{LVM})$$

where:

EFR_{LVM}	=	extrapolated LVM allowable feed rate
WFR	=	liquid waste feed rate
C_{As}	=	native waste feed concentration of arsenic
C_{Be}	=	native waste feed concentration of beryllium
C_{Cr}	=	native waste feed concentration of chromium
SR_{Cr}	=	spike rate of chromium
92 $\mu g/m^3$	=	HWC MACT LVM
SC_{LVM}	=	three-run LVM average stack gas concentration corrected to 7% oxygen

The maximum LVM allowable mass feed rate will be calculated as noted above. The total LVM feed rate limit for each unit should be expressed as a 12-hour rolling average, equal to the extrapolated average of the average LVM feed rate during the three runs of the respective capacity tests. Records of waste feed analyses, and the electronic waste feed operational data, will be maintained to demonstrate compliance with the LVM feed rate limits.

7.3.1.7 Minimum Combustion Temperatures [40 CFR 63.1209(j)(1), (k)(2)]

The firebox and flue gas cooler (waste heat boiler) sections of NCIN-1 and NCIN-2 are identical. The 2004 CPT included testing of NCIN-1 at the conditions of the minimum combustion temperature with maximized combustion gas flow (minimum residence time), since these conditions are least favorable for DRE.

Hexion proposes to retain the previous minimum combustion temperature limit established by the 2004 CPT. The minimum combustion temperature limit was established as an hourly rolling average limit from the average of the average combustion temperatures demonstrated during the three runs of the 2004 CPT Test 1.

For the FRS CPT, the low temperature demonstration test will be conducted as nearly as possible to the minimum combustion temperature limit demonstrated in 2004. This test will include measurement of CO and HC emissions to demonstrate continued compliance with these performance standards while treating waste at minimum combustion temperature.

7.3.1.8 Minimum Caustic Scrubber Recycle Flow Rates (Minimum L/G) [40 CFR 63.1209(m)(1)(i)(C), (n)(5), (o)(2)]

The NCIN-1 and NCIN-2 capacity tests will be conducted to demonstrate the minimum caustic scrubber recycle flows at maximum combustion gas flows. Therefore, by establishing limits on maximum overall combustion gas flows and minimum recycle flows for the caustic scrubbers, the minimum liquid to gas ratios are established by default (minimum L, maximum G approach). NCIN-1 and NCIN-2 caustic scrubber recycle flows will be monitored on a continuous basis. Based on successful demonstration of HCl and Cl_2 control during the NCIN-1 and NCIN-2 capacity tests, the minimum caustic scrubber recycle flow limits will be established as hourly rolling averages equal to the average values demonstrated during the NCIN-1 and NCIN-2 respective capacity test run average recycle flows.

7.3.1.9 Minimum Caustic Scrubber pH Values [40 CFR 63.1209(l)(2), (o)(3)(iv)]

The NCIN-1 and NCIN-2 capacity tests will be conducted to demonstrate the minimum caustic scrubber pH. NCIN-1 and NCIN-2 caustic scrubber pHs will be monitored on a continuous basis. Based on successful demonstration of HCl and Cl_2 control during the NCIN-1 and NCIN-2 capacity tests, the minimum caustic scrubber pH limits will be established as hourly rolling average values equal to the averages demonstrated the NCIN-1 and NCIN-2 respective capacity test run average pH values.

7.3.1.10 Maximum Caustic Scrubber Recycle Solids Concentrations [40 CFR 63.1209(m)(1)(i)(B)(1), (n)(3)]

To control the buildup of solids in the caustic scrubber systems, Hexion proposes establishing a maximum caustic scrubber recycle conductivity on a continuous basis [40 CFR 63.1209(m)(1)(i)(B)(1)(i)]. The NCIN-1 and NCIN-2 capacity tests will be conducted to demonstrate the maximum caustic scrubber recycle conductivity. Based on successful demonstration of particulate control during the respective capacity tests, the maximum caustic scrubber recycle conductivity limits will be established as 12-hour rolling averages equal to the average of the capacity test run average caustic scrubber recycle conductivity for the respective incineration systems.

7.3.1.11 Minimum Catalytic Oxidizer Inlet Temperature [40 CFR 63.1209(k)(8)(i)]

The HWC MACT requires establishing a minimum inlet temperature limit for catalytic oxidizer units. The 2004 CPT included minimum combustion temperature and capacity testing of NCIN-1, and capacity testing of NCIN-2, to demonstrate PCDD/PCDF emissions over the range of system operation. The confirmatory testing data will be submitted as data-in-lieu for demonstrating FRS PCDD/PCDF emissions compliance. During the confirmatory testing, the incinerators will be operated at normal to high-normal liquid waste feed conditions. The catalytic oxidizer will be operated as close as possible to the temperature limit established by the 2004 CPT. This minimum temperature limit was established as hourly rolling average values equal to the average of the NCIN-1 demonstrated DRE and capacity test run average temperature values. Based on successful demonstration of PCDD/PCDF emissions control to the HWC MACT standard, the NCIN-1 and NCIN-2 minimum catalytic oxidizer minimum inlet gas temperature limit established by the 2004 CPT should be retained.

7.3.1.12 Maximum Stack Gas Flow Rates [40 CFR 63.1209(j)(2), (k)(3), (m)(1)(i)(C), (n)(5), (o)(2)]

The 2004 CPT included stack gas flow rate measurements as the indicator of combustion gas residence times. The maximum stack gas flow rates for NCIN-1 and NCIN-2 were established from the average of the maximum hourly rolling average stack gas flows demonstrated during the three runs of the respective capacity tests.

Hexion proposes to retain the previous maximum combustion gas velocity limits established by the 2004 CPT. The current maximum combustion gas velocity limit is based on stack gas flow. The stack gas flow is continuously corrected for temperature to thousand standard cubic feet per minute (mscfm). Normalizing the stack flow limit ensures the actual combustion gas flows through the combustion zone and APC system are consistently limited.

The FRS CPT will be conducted as nearly as possible to the maximum combustion gas velocity values demonstrated in 2004. The maximum waste feed rate tests will include measurement of particulate, HCl/Cl_2, and metals emissions to demonstrate continued compliance with these performance standards while treating waste at maximum combustion gas velocity.

7.3.2 Parameters Established by Regulatory Requirements (Group 2 Limits)

Group 2 parameter limits are based on regulatory requirements. The following parameters are proposed as Group 2 parameters for the incineration system.

7.3.2.1 Maximum Stack Gas CO Concentration [40 CFR 63.1203(b)(5)(i)]

The maximum hourly rolling average stack gas CO concentrations will be maintained at or below 100 ppmv corrected to 7% oxygen (dry basis) during the test. Hexion expects a permit limits specifying a

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maximum allowable stack gas carbon monoxide concentration of 100 ppmv hourly rolling average corrected to 7% oxygen, dry basis for NCIN-1 and NCIN-2.

7.3.2.2 Fugitive Emissions Control [40 CFR 63.1206(c)(5)(i)(B), 63.1209(p)]

The HWC MACT regulations require controlling combustion system leaks. By maintaining the NCIN-1 and NCIN-2 fireboxes under vacuum, NCIN-1 and NCIN-2 comply with the standards of 40 CFR 63.1206(c)(5)(i)(B). Firebox pressure will be continuously monitored. A maximum firebox pressure limit of –0.0 inches water column (inwc) is proposed. If firebox pressure exceeds this limit for more than one (1) second, waste feed will be stopped.

7.3.3 Parameters Established by Manufacturer's Recommendations, Operational Safety and Good Operating Practice (Group 3 Limits)

Group 3 parameter limits are based on manufacturer's recommendations, operational safety and good operating practice considerations. The following parameters are proposed as Group 3 parameters.

7.3.3.1 Maximum Waste Viscosity [40 CFR 63.1209(j)(4)]

Based on manufacturer's specifications for the waste nozzles, the final permit should include a limit on the maximum liquid waste viscosity of 30 centipoise (cP). Records of waste feed analyses will be maintained to demonstrate compliance with the viscosity limit.

7.3.3.2 Minimum Waste Atomization Steam Pressure [40 CFR 63.1209(j)(4)]

Based on operating experience, the final permit should include a limit on the minimum waste atomization steam pressure to 25 psig. The waste feed atomization steam lines are equipped with local pressure indicators. Hexion's current standard operating practice is for operators to check the steam line pressures daily. Hexion proposes to continue this practice under the HWC MACT permitted operation.

7.3.3.3 Minimum Liquid Feed Pressure for Caustic Scrubber Recycles [40 CFR 63.1209(i)(2), (o)(3)(iii)]

The HWC MACT requires establishing a minimum recycle liquid feed pressure limits for "low energy wet scrubbers" like the caustic scrubber systems. Recycle flows pressure provides an indication that proper liquid distribution is being maintained in the caustic scrubbers. Pressure transducers on the caustic scrubber recycle line to each column are used to provide continuous measurement via the CMS.

7.3.3.4 Maximum Catalyst Time In-use [40 CFR 63.1209(k)(8)(ii)]

The HWC MACT provisions at §63.1209(k)(8)(ii) require establishing a maximum time in-use for the catalytic oxidizer catalyst based on manufacturer's recommendation. CRI, the catalyst manufacturer, has data for the selected catalyst that shows the catalyst is still capable of effectively controlling PCDD/PCDF emissions after six (6) years of use. CRI is continually collecting data that is allowing this time to be extended to longer periods.

Because there is no firm manufacturer data as to the continued effectiveness of the selected catalyst, Hexion proposes that no fixed in-use time limit for the catalyst be established. During routine maintenance that occurs approximately every 2-3 months, Hexion separately shuts down each incinerator. Catalyst maintenance includes shaking the catalyst bed to remove particulate matter. This maintenance procedure results in a portion of the catalyst also being dislodged and removed. Fresh catalyst is added to the bed (at the top of the bed) to replace the catalyst removed during maintenance. Based on the amounts of catalyst removed and replaced at each servicing, the catalyst bed is completely replaced approximately every 2-3 years, which is within the catalyst manufacturer's guarantee.

In addition to the periodic fresh catalyst addition, Hexion will use the ongoing CPT and confirmatory PCDD/PCDF emissions testing data to continue evaluating the performance and effectiveness of the catalyst.

7.3.3.5 Catalyst Replacement Specification [40 CFR 63.1209(k)(8)(iii)]

The CATOX system catalyst is CRI Grade S-090 manufactured by CRI. This catalysts is a pelletized vanadium pentoxide (V_2O_5) supported by titanium dioxide (TiO_2). When catalyst replacement is determined to be necessary based on PCDD/PCDF stack sampling and analyses, and projected catalyst effectiveness, Hexion will replace the catalyst with an equivalent or better catalyst.

7.3.3.6 Maximum Catalytic Oxidizer Inlet Temperature [40 CFR 63.1209(k)(8)(iv)]

The HWC MACT requires establishing a maximum inlet temperature limit for catalytic oxidizer units based on manufacturer's specifications. Based on manufacturer's specifications for the catalyst, the final permit should include a limit on the maximum catalytic oxidizer inlet temperature of 700°F. The catalytic oxidizer inlet temperature is proposed as an hourly rolling average limit.

7.3.3.7 Minimum Differential Pressure for Low Energy Wet Scrubbers [40 CFR 63.1209(l)(2), (o)(3)(ii)]

The HWC MACT requires establishing a minimum differential pressure limit for "low energy wet scrubbers". The caustic scrubbers meet the definition of "low energy wet scrubbers". The approved Alternative Monitoring Application waives this requirement. Hexion bases for justifying waiving this requirement are: 1) the minor variations in differential pressures through the very low pressure drop caustic scrubber chambers do not provide any relevant indication of scrubber performance, and 2) the limits on minimum recycle flow rates and pressure for the caustic acid scrubbers will provide equivalent assurance of proper liquid distribution and liquid to gas ratios.

7.3.4 Extrapolation of Metals Feed Rate Limits [40 CFR 63.1207(f)(1)(x) & 63.1209(l)(1)(i), (n)(2)(ii)]

7.3.4.1 Extrapolation Methodology and Rationale [40 CFR 63.1207(f)(1)(x)(A)]

Hexion will spike lead and chromium during the respective capacity tests to demonstrate system removal efficiencies (SREs) for the SVM and LVM groups, respectively. Since these metals are representative of the metals volatility groups, the calculated SRE for each of these metals can then be applied to any other metals in the SVM or the LVM metal volatility groups. System removal efficiencies will be calculated using the following equation:

$$SRE_i = \left[1 - \frac{\dot{m}_{i,out}}{\dot{m}_{i,in}}\right] \times 100\%$$

where:

$\dot{m}_{i,in}$ = mass feed rate of metal i.

$\dot{m}_{i,out}$ = mass emission rate of metal i.

SRE_i = demonstrated system removal efficiency of metal i.

The demonstrated system removal efficiency for the representative metal from each metal volatility group can be used to establish mass feed rate limits for its metal volatility group using the following equation:

$$\dot{m}_{g,in,\max} = \frac{\dot{m}_{g,out,MACT}}{\left(1 - \frac{SRE_i}{100}\right)}$$

where:

$\dot{m}_{g,in,\max}$ = maximum allowable mass feed rate of metal group g

$\dot{m}_{g,out,MACT}$ = maximum allowable mass emission rate of metal group g based on the MTEC analysis

SRE_i = demonstrated system removal efficiency of metal i designated to be the metal representative of the metal group.

Because metals SREs are non-linear relative to the metals feed rates[1], the proposed upward extrapolation of the demonstrated metals feed rates to the HWC MACT allowable emission standard assures ongoing compliance with the HWC MACT standards.

7.3.4.2 Documentation of Historical Metals Feed Rates [40 CFR 63.1207(f)(1)(x)(B)]

The metals data presented in Table 2-1 reflects historical data for average metals concentrations in the heterogeneous waste streams over the last two years. Hexion manufactures many different products. The target metals feed rates were near the maximum levels of metals in the Hexion waste streams. However, if the final permitted metals feed rate limits for the incineration systems were to be limited solely

[1] *Technical Implementation Document for EPA's Boiler and Industrial Furnace Regulations*, Section 10.5.2, EPA-530-R-92-011 (PB92-154 947), March, 1992

to the test demonstrated feed rates, such limits could hamper the ability of Hexion to treat future wastes. A reasonable margin of operational flexibility is required to accommodate the treatment of future wastes that may differ from those treated in recent years.

Hexion is continuing the collection of metals concentration information on the waste streams. These data, coupled with similar data already collected, will be statistically assessed and compared to the test results. Based on the results of the test, Hexion may propose extrapolation of the demonstrated metals feed rates via the methodology as presented above.

7.3.4.3 Documentation of the Adequacy of Test Metals Feed Rates [40 CFR 63.1207(f)(1)(x)(C)]

Table 7-3 presents the target feed rates of chromium (LVM) and lead (SVM) proposed for the test program. Based on the stack concentration information provided in QAPP, and expected respective NCIN-1 and NCIN-2 stack gas flows, the maximum metals SREs at the stack detection limits can be determined.

The above data demonstrate the level of metals spiking during the test will mask the sampling and analysis imprecision and accuracy. The SREs determined from the testing will be as accurate and precise as if full spiking were targeted.

7.4 TRANSITION TO NEW HWC MACT OPERATING LIMITS [40 CFR 63.1211(d)(4), 63.1210(d)(2)]

Upon completion of the CPT report, Hexion will submit a modification to existing Part 70 Air Permit for the incinerators to include the new operating conditions based on the results of FRS CPT.

Table 7-1. Summary of Proposed NCIN-1 and NCIN-2 Operating Limits

Operational Parameter	NCIN-1	NCIN-2	AWFCO	Averaging Period	Method of Setting Limit
Group 1 Parameters					
Maximum liquid waste feed rate (lb/hr)	8,343	7,229	Yes	Hourly Rolling Average	Average of the maximum rolling average feed rate during the three capacity test runs of each respective unit during the 2004 CPT. [40 CFR 63.1209(j)(3), (k)(4)]
Maximum total chloride feed rate (lb/hr)	5,256	4,554	Yes	12-Hour Rolling Average	Mass chloride feed rate limit based on the average of the average feed rate during the three capacity test runs of each respective unit. [40 CFR 63.1209(o)(1), (n)(4)]
Maximum ash feed rate (lb/hr)	5.0	5.0	Yes	12-Hour Rolling Average	Mass ash feed rate limit based on the average of the average feed rate during the three capacity test runs of each respective unit. [40 CFR 63.1209(m)(3)]
Maximum mercury (Hg) feed rate (g/hr)	1.48	1.48	Yes	Hourly Rolling Average	Mass feed rate limit based on Hg MTEC at expected minimum combustion gas flow of 6,700 dscfm (189.7 dscm) @ 7% O_2. [40 CFR 63.1207(m)(2), (n)]
Maximum total semivolatile metals (SVM) feed rate (g/hr)	21	19	Yes	12-Hour Rolling Average MTEC	Mass feed rate limit based on average of the average 2004 CPT-demonstrated SVM feed rates, and is less than the maximum potential extrapolated mass feed rate limit based 2004 CPT-demonstrated SREs during the three capacity test runs of each respective unit. [40 CFR 63.1209(n)(2)(i)(A), (ii);
Maximum total low volatility metals (LVM) feed rate (g/hr)	32	38	Yes	12-Hour Rolling Average	Mass feed rate limit based on three times the pre-HWC MACT historical maximum LVM feed rates, and is less than the maximum potential extrapolated mass feed rate limit based on the average of the average LVM feed rates and demonstrated SREs during the three capacity test runs of each respective unit during the 2004 CPT. [40 CFR 63.1209(n)(2)(i)(B)-(C), (ii); 63.1207(m)(2), (n)]
Minimum combustion temperature (° F)	1,718	1,718	Yes	Hourly Rolling Average	Average of the average combustion temperature during three test runs of the 2004 CPT NCIN-1 low temperature DRE test. [40 CFR 63.1209(j)(1), (k)(2)]
Minimum caustic scrubber recycle flow (gpm) (minimum L/G)	410	410 per scrubber	Yes	Hourly Rolling Average	Average of the average recycle flow rate during the three capacity test runs of each respective unit. [40 CFR 63.1209(m)(1)(i)(C), (n)(5), (o)(2)]
Minimum caustic scrubber recycle pH	7.2	7.2	Yes	Hourly Rolling Average	Average of the average pH during the three capacity test runs of each respective unit. [40 CFR 63.1209(l)(2), (o)(3)(iv)]
Maximum caustic scrubber recycle conductivity (S/cm)	23,000	23,000	Yes	12-Hour Rolling Average	Average of the average conductivity during the three capacity test runs of each respective unit. [40 CFR 63.1209(m)(1)(B)(i), (m)(2)]

Table 7-1. Summary of Proposed NCIN-1 and NCIN-2 Operating Limits (continued)

Operational Parameter	NCIN-1	NCIN-2	AWFCO	Averaging Period	Method of Setting Limit
Group 1 Parameters (continued)					
Minimum CATOX inlet gas temperature (° F)	330	330	Yes	Hourly Rolling Average	Average of the average CATOX inlet temperature during three test runs of the NCIN-1 low temperature DRE test. [40 CFR 63.1209(k)(6)(i)]
Maximum stack gas flow (mscfm)	17.19	14.56	Yes	Hourly Rolling Average	Average of the maximum rolling average flow rate during the three capacity test runs of each respective unit during the 2004 CPT. [40 CFR 63.1209(j)(2), (k)(3), (m)(1)(i)(C), (n)(5), (o)(2)]
Group 2 Parameters					
Maximum combustion chamber pressure (inwc)	0.0	0.0	Yes	None; 1-second delay	HWC MACT Rule [40 CFR 63.1206(c)(5)(i)(B)]
Maximum stack gas CO conc. (ppmv, dry @ 7% O2)	100	100	Yes	Hourly Rolling Average	HWC MACT Rule [40 CFR 63.1203(a)(5)(i)]
Group 3 Parameters					
Minimum waste atomization steam pressure (psig)	25	25	No	None; checked daily	Operating experience [40 CFR 63.1209(j)(4)]
Minimum caustic scrubber recycle pressure (psig)	10	10	Yes	Hourly Rolling Average	Operating experience [40 CFR 63.1209(l)(2), (o)(3)(iii)]
Maximum waste viscosity (cP)	30	30	No	N/A	Manufacturer's specifications [40 CFR 63.1209(j)(4)]
Maximum CATOX catalyst in-use time (years)	Note a		No	N/A	Manufacturer's specifications [40 CFR 63.1209(k)(8)(ii)]
CATOX catalyst replacement specification	Note b		No	N/A	Manufacturer's specifications [40 CFR 63.1209(k)(8)(iii)]
Maximum CATOX inlet gas temperature (° F)	700	700	Yes	Hourly Rolling Average	Manufacturer's specifications [40 CFR 63.1209(k)(8)(iv)]

Notes:

[a] Routine catalyst includes shaking the catalyst bed to remove particulate matter. This maintenance procedure results in a portion of the catalyst also being dislodged and removed. Fresh catalyst is added to the bed (at the top of the bed) to replace the catalyst removed during maintenance. Based on the amounts of catalyst removed and replaced at each servicing, the catalyst bed is completely replaced approximately every 2-3 years, which is within the catalyst manufacturer's guarantee of six (6) years.

[b] CRI Grade S-090 or equivalent.

AWFCO - Automatic waste feed cutoff
N/A-Not applicable

Table 7-2. Recommended NCIN-1 and NCIN-2 AWFCO Setpoints during Testing

Operational Parameter	NCIN-1	NCIN-2	AWFCO	Setpoint Basis	Averaging Period
Group 1 Parameters					
Maximum liquid waste feed rate (lb/hr)	8,760	7,591	Yes	Target +5%	Hourly Rolling Average
Minimum combustion temperature (° F)	1,668	1,668	Yes	Target -50 °F	Hourly Rolling Average
Minimum caustic scrubber recycle flow (gpm) (minimum L/G)	360	360 per scrubber	Yes	Target -50 gpm	Hourly Rolling Average
Minimum caustic scrubber recycle pH	6.2	6.2	Yes	Target -1.0	Hourly Rolling Average
Maximum caustic scrubber recycle conductivity (S/cm)	46,000	46,000	Yes	Target +100%	12-Hour Rolling Average
Minimum CATOX inlet gas temperature (° F)	280	280	Yes	Target -50 °F	Hourly Rolling Average
Maximum stack gas flow (mscfm)	18.9	16.0	Yes	Target +10%	Hourly Rolling Average
Group 2 Parameters					
Maximum combustion chamber pressure (inwc)	0.0	0.0	Yes	Normal	None; 1-second delay
Maximum stack gas CO conc. (ppmv, dry @ 7% O2)	100	100	Yes	Normal	Hourly Rolling Average
Group 3 Parameters					
Minimum waste atomization steam pressure (psig)	25	25	No	Normal	None; checked daily
Minimum caustic scrubber recycle pressure (psig)	10	10	Yes	Normal	Hourly Rolling Average
Maximum CATOX inlet gas temperature (° F)	700	700	Yes	Normal	Hourly Rolling Average

AWFCO - automatic waste feed cutoff

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3.8.2 PCDD/PCDF Emissions

Hexion plans to demonstrate FRS PCDD/PCDF emissions compliance via data-in-lieu. Hexion is scheduled to conduct PCDD/PCDF emissions confirmatory testing of NCIN-1 and NCIN-2 in March 2009. Hexion plans to submit these PCDD/PCDF emissions data for demonstrating FRS compliance. A separate test plan for the PCDD/PCDF emissions confirmatory testing will be submitted in accordance with 40 CFR 63.1207(e)(1)(ii).

This CPT plan is based on submitting the confirmatory test PCDD/PCDF emissions data as data-in-lieu for FRS compliance. Hexion expects the FRS CPT will be conducted in 2009. If the CPT plan approval timing allows, the PCDD/PCDF emissions confirmatory test and FRS CPT may be performed concurrently.

3.9 TEST OPERATING AND SAMPLING PROTOCOLS

The combustion and energy recovery portions of NCIN-1 and NCIN-2 are identical. The downstream HCl recovery and APC systems of NCIN-1 and NCIN-2 differ as described in Section 3.0 of the CPT plan. Both incineration systems treat the same liquid waste and vent vapor streams. The differences between the HCl recovery and APC systems impact the maximum liquid waste treatment capabilities between the two incineration systems. Specifically, the HCl recovery and acid gas control capacities NCIN-1 and NCIN-2 differ.

Hexion proposes to demonstrate FRS compliance while operating NCIN-1 and NCIN-2 as nearly as possible to the conditions demonstrated during the 2004 CPT. The following test protocol is proposed:

- NCIN-2 minimum combustion temperature/maximum combustion gas velocity CO/THC demonstration test: This test will reaffirm the adequacy of the current minimum combustion temperature minimum limit for both NCIN-1 and NCIN-2. This test will also demonstrate compliance with HWC MACT emissions standards for CO and THC while feeding hazardous waste and operating at minimum combustion temperature.

- NCIN-1 and NCIN-2 maximum waste feed rate test: This test will be performed on each unit to demonstrate respective compliance with HWC MACT CO, THC, PM, HCl/Cl_2, and metals emissions, while feeding liquid hazardous waste at maximum rate. These tests will reaffirm the adequacy of the current individual maximum waste feed rate and maximum combustion gas velocity limits for NCIN-1 and NCIN-2. These tests will establish respective maximum ash, chloride, and metals feed rate limits for each unit.

These test conditions will include the following sampling and analyses:

NCIN-2 Minimum Combustion Temperature CO/THC Demonstration Condition

- Stack gas THC concentration using a temporary CEM according to the protocols in 40 CFR 60 Appendix A, Method 25A.
- Stack gas CO and O_2 concentrations by installed continuous emissions monitors (CEMs) according to the protocols in 40 CFR 60, Appendix B, Performance Specification 4B.

NCIN-1 and NCIN-2 Maximum Waste Feed Rate Conditions (Maximum Ash, Chloride and Metals)

- Liquid waste feed for heating value, viscosity, density, ash content, total chloride, and the HWC MACT metals [arsenic (As), beryllium (Be), cadmium (Cd), total chromium (Cr), lead (Pb) and mercury (Hg)] analyses
- Waste feed spiking of the ash surrogate and two metals (chromium and lead)
- Stack gas for particulate, HCl, and Cl_2 using a 40 CFR 60, Appendix A, Method 26A sampling train
- Stack gas for As, Be, Cd, total Cr and Pb using a 40 CFR 60, Appendix A, Method 29 sampling train.
- Stack gas THC concentration using a temporary CEM according to the protocols in 40 CFR 60 Appendix A, Method 25A.
- Stack gas CO and O_2 concentrations by installed continuous emissions monitors (CEMs) according to the protocols in 40 CFR 60, Appendix B, Performance Specification 4B.

The sampling and analytical protocols are summarized in Tables 3-2 and 3-3. The CPT is designed to demonstrate range of worst-case operation of the incinerators. During all testing, the incinerators will be operated treating allyl chloride heavy ends (ACHE) liquid waste.

During the minimum temperature CO/THC demonstration, NCIN-2 will be operated treating a combination of liquid waste and vapor vents. The minimum combustion temperature demonstration will show that the HWC MACT CO and THC emissions standards are being met by NCIN-1 and NCIN-2 at the current limit.

During the respective maximum liquid waste feed/maximum combustion gas velocity test conditions of NCIN-1 and NCIN-2, only liquid waste will be treated; all vapor vents will be directed to the incinerator not being tested. The maximum chlorine/chloride feed rates demonstrated during the respective capacity tests will show each incinerator's APC system's capabilities in meeting the HCl/Cl_2 emissions performance standard. During subsequent HWC MACT operation, the incinerators may be operated treating only liquid wastes, treating only vapor vents, or treating a combination of liquid wastes and vapor vents. To accommodate treatment of the vapor vents, the incinerators are normally operated at lower liquid waste feed rates. The maximum waste feed rate/maximum combustion gas velocity demonstrations will show that HCl/Cl_2 emissions standard is being met by NCIN-1 and NCIN-2 at the demonstrated maximum feed rates. During subsequent HWC MACT operation of the incineration systems, the total chlorine/chloride feed rates demonstrated during the respective capacity tests will not be exceeded by any combination of liquid waste and vent vapors.

The respective maximum liquid waste feed rate/maximum combustion gas velocity condition tests will also demonstrate each incinerator's APC system's capability to control particulate and metals emissions to the HWC MACT performance standards when ash and metals feed rates are at their maximums. Therefore, the ash and metals feed rate limits established via the respective tests will not be exceeded during subsequent HWC MACT operation.

Table 3-1. HWC MACT Standards Compliance of NCIN-1 and NCIN-2

LIMIT	REGULATORY CITATION - 63.1209	HOW ESTABLISHED	AVERAGING TIME	ASSOCIATED STANDARD						
				DRE	Dioxins/ Furans	Hg	SVM	LVM	PM	HCl/Cl_2
LIMITS ASSOCIATED WITH THE COMBUSTION UNIT										
Minimum combustion chamber temperature	(j)(1), (k)(2)	Average of test run averages	Hourly rolling average	**DILO**[c]	**DILO**[c,d]					
Maximum combustion chamber pressure	(p)	Lower than ambient pressure	Instantaneous	For control of fugitive emissions - no quantified limits established						
Maximum stack gas flow rate	(j)(2), (k)(3), (m)(2), (n)(5), (o)(2)	Average of the maximum hourly rolling averages	Hourly rolling average	**DILO**[c]	**DILO**[c,d]		**DILO**[c d]	**DILO**[c d]	**DILO**[c]	**DILO**[c]
Operation of waste firing system[g]	(j)(4)	Average of the maximum hourly rolling averages	Hourly rolling average	**NA**						
LIMITS ASSOCIATED WITH THE INCINERATOR FEED STREAMS										
Maximum hazardous waste feed rate	(j)(3), (k)(4), Preamble 9/30/99 Rule, page 52937	Maximum pumpable and maximum total as the average of the maximum rolling hour averages	Hourly rolling average	**DILO**[c]	**DILO**[c,d]					
Maximum feed rate of mercury	(l)(1)	Average of the average hourly rolling averages (may be extrapolated upward)	12-hour rolling average			**MTEC**				
Maximum feed rate of SVM	(n)(2)(A)	Average of the average hourly rolling averages (may be extrapolated upward)	12-hour rolling average				**Max. Feed Rate Test**			

Table 3-1. HWC MACT Standards Compliance of NCIN-1 and NCIN-2

LIMIT	REGULATORY CITATION - 63.1209	HOW ESTABLISHED	AVERAGING TIME	ASSOCIATED STANDARD						
				DRE	Dioxins/ Furans	Hg	SVM	LVM	PM	HCl/Cl_2
Maximum feed rate of LVM [a]	(n)(2)(B), (n)(2)(C)	Average of the average hourly rolling averages (may be extrapolated upward)	12-hour rolling average					Max. Feed Rate Test		
Maximum feed rate of total chlorine and chloride	(n)(4), (o)(1)	Average of the average hourly rolling averages	12-hour rolling average				Max. Feed Rate Test	Max. Feed Rate Test		Max. Feed Rate Test
Maximum ash feed rate	(m)(3), Preamble 9/30/99 Rule, page 52954 and 52955	Average of the average hourly averages	12-hour rolling average						Max. Feed Rate Test	
LIMITS ASSOCIATED WITH WET SCRUBBERS										
Minimum pressure drop across low energy wet scrubbers[c]	(o)(3)(ii)	Manufacturer's specifications	Hourly rolling average			MTEC				AMA [e]
Minimum liquid feed pressure to a low energy wet scrubber	(o)(3)(iii)	Manufacturer's specifications	Hourly rolling average			MTEC				Max. Feed Rate Test
Maximum solids content of scrubber water via CMS or minimum blowdown rate and either minimum scrubber tank volume or level	(m)(1)(i)(B)	Average of the test run averages	Hourly rolling average				Max. Feed Rate Test[f]	Max. Feed Rate Test[f]	Max. Feed Rate Test[f]	

Table 3-1. HWC MACT Standards Compliance of NCIN-1 and NCIN-2

LIMIT	REGULATORY CITATION - 63.1209	HOW ESTABLISHED	AVERAGING TIME	ASSOCIATED STANDARD						
				DRE	Dioxins/ Furans	Hg	SVM	LVM	PM	HCl/Cl_2
Minimum Liquid to Gas Ratio (L/G), or minimum liquid and maximum flue gas flow rates	(l)(2), (m)(1)(C), (o)(3)(v)	Average of the test run averages	Hourly rolling average			MTEC				Max. Feed Rate Test
Minimum scrubber water pH	(o)(3)(iv)	Average of the test run averages	Hourly rolling average							Max. Feed Rate Test
LIMITS ASSOCIATED WITH CATALYTIC OXIDIZER SYSTEMS										
Minimum flue gas temperature at entrance of catalytic oxidizer	(k)(8)(i)	Average of the test run averages	Hourly rolling average		DILO [c,d]					
Maximum in-use time of catalyst	(k)(8)(ii)	Manufacturer's specifications	Defined service time		NA					
Catalyst Replacement Specification	(k)(8)(iii)	Same or better as used during CPT for select parameters	N/A		NA					
Maximum flue gas temperature at entrance of catalytic oxidizer	(k)(8)(iv)	Manufacturer's specifications	Hourly rolling average		NA					

Table 3-1. HWC MACT Standards Compliance of NCIN-1 and NCIN-2

Notes:

a) Dual LVM feed rate limits for pumpable and total feed streams are not required if the total LVM feed rate limit is based solely on pumpable feed streams

b) Examples of low energy wet scrubbers include spray towers, packed beds, or tray towers

c) Limit based on 2004 CPT test results submitted as data-in-lieu in accordance with 40 CFR 63.1206(b)(7) and 63.1207(c)(2)(iv).

d) PCDD/PCDF emissions from the planned March 2009 confirmatory testing will be submitted as data-in-lieu.

e) The Alternative Monitoring Application (AMA) originally submitted in 2001 in accordance with 40 CFR 63.1209(g) and 63.8(f) requested waiving of the minimum scrubber differential pressure limit. This waiver was approved by EPA contingent upon continuous monitoring limits for minimum liquid feed pressure and minimum L/G.

f) Hexion complies with the maximum solids content limit via continuous monitoring and control of the scrubber water conductivity.

g) Examples include waste atomization media pressure.

DILO – Data-in-lieu-of

MTEC – Maximum Theoretical Emissions Concentration

Table 3-2. Minimum Temperature Demonstration Test Sampling and Analysis

Sample Name	Sampling Location/ Access	Sampling Equipment	Sampling Reference Method	Sample Size/Frequency	Analytical Parameters	Analytical Reference Method
Stack Gas	CEMS Port	Installed CO and O_2 CEMS	40 CFR 60 Appendix B Specification 4B	Continuous for each one hour test run	CO and O_2	40 CFR 60 Appendix B Specification 4B
Stack Gas	Non-Isokinetic Port	Temporary THC CEMS	40 CFR 60 Appendix A Method 25A	Continuous for each one hour test run	THC	40 CFR 60 Appendix A Method 25A

4.0 ORGANIZATION OF PERSONNEL, RESPONSIBILITIES, AND QUALIFICATIONS

4.1 GENERAL

The project organization for this test is summarized in Figure 4-1. The Hexion Plant Manager is responsible for oversight of all activities performed at the Hexion site. The Hexion Environmental, Health & Safety Manager and Hexion Test Project Manager report to the Hexion Plant Manager.

The Hexion Environmental, Health & Safety Manager is responsible for all day-to-day environmental compliance activities related to the plant site. During the testing, the Hexion Environmental, Health & Safety Manager and other environmental staff members will be available to lend support to the testing program where needed.

During the test, the Hexion Test Project Manager, on behalf of the Hexion Environmental, Health & Safety Manager, will be responsible for ensuring that the processes run properly and that the unit achieves the desired test conditions on each test day. As such, the Hexion Test Project Manager, working through the Hexion Production Manager, will assign responsibilities concerning unit operations. The Hexion Test Project Manager will be responsible for ensuring that all of the applicable process data are collected during each of the test runs. The Hexion Test Project Manager will also be responsible for supervising all of the contractors associated with the program and will serve as the official communication link between Hexion and the respective contractors and regulatory observers.

The Test Coordinator and Quality Assurance Officer from the Test Management Contractor are experienced in the technical coordination and QA/QC associated with the testing of combustion systems similar to these incinerators. The Stack Sampling Contractor is experienced in conducting the stack sampling called for in the test plan and will conduct the stack sampling for this project. The analytical laboratory is experienced in the analysis of stack emissions and process samples, and will provide analytical services for this project.

Resumes of key individuals who will be implementing the test are presented in Attachment A. Louisiana Environmental Laboratory Accreditation Program (LELAP) approvals for the selected stack sampling and analytical contractors are presented in Attachment B.

4.2 TEST COORDINATOR

The Test Coordinator is responsible for the execution of the NCIN-1 and NCIN-2 CPT Plan, QAPP, preparation of the final test report, and interpretation of the test results. During the test, the Test Coordinator is responsible for the overall implementation of the test program. The Test Coordinator will serve as the focal point between the Hexion Test Project Manager, Hexion Production Manager and the sampling contractors on testing related matters, and will coordinate activities among various project team members. Specific Test Coordinator responsibilities include:

- Ensuring compliance with the test plans and the QAPP by all project team members during the test
- Documenting testing activities in a field logbook
- Providing sample checklists, labels, and request for analysis (RFA) and chain of custody (COC) forms for use by the Stack Sampling Contractor and the Process Sample Coordinator
- Assisting the Hexion Test Project Manager in interfacing with the regulatory observers and/or oversight contractors during the test
- Providing coordination between the Hexion Test Project Manager and the sampling team during the test, especially regarding decisions to start, stop, hold or repeat sampling runs
- Performing inspections of the process equipment, process controls, process operations, data acquisition and recording systems, and sampling activities for compliance with this QAPP and the test plans
- Providing field review of process operating logs, and completed sample collection sheets, stack sampling logs, COC forms, and RFA forms
- Interfacing with the Laboratory Analysis Coordinator while samples are being analyzed
- Interfacing with the other testing contractors while the stack sampling and other test data are being reduced
- Supervising production of the test reports
- Certifying the overall test results and the final test reports
- Preparing operating specifications for the system based on the results of the test.

4.3 QUALITY ASSURANCE OFFICER

The Quality Assurance Officer's (QAO's) duties include those listed in "*Scope of Duties for Project QAO*" located on the Hazardous Waste Engineering web page of LDEQ's web site. Specific pre-test and on-site QAO responsibilities will include the following:

- Assuring all individuals included in the QAPP Distribution List receive current copies of revisions as applicable
- Reviewing QA/QC activities and communicating the results of those activities to the appropriate personnel (refer to Figure 4-1)
- Making recommendations to the Hexion Test Project Manager and Test Coordinator regarding any problems that may be detected

- Ensuring that the sample preservation and shipments are being properly monitored by the Sample Custodian and that any samples with preservation or holding time exceedances are reported to the Test Coordinator and Hexion Test Project Manager immediately
- Ensuring that appropriate corrective actions are taken if problems are detected
- Conducting or coordinating any required audits of field or laboratory procedures to ensure compliance with the QAPP
- Verifying that test data are adequately recorded and maintained and that data are properly reduced, validated, and interpreted
- Reviewing sample documentation to include sample labels, RFAs and COCs against the sample checklists to ensure all required test samples are collected and properly documented

The QAO's post-test responsibilities will include the following:

- Reviewing the stack sampling and analytical reports for completeness and accuracy
- Conducting or coordinating any required audits of the data reduction or laboratory procedures to ensure compliance with the QAPP
- Ensuring the results of the above mentioned inspections will be documented in a written report, included in the final CPT Report
- Conducting validation of the analytical data generated for completeness of the reports including documentation of the required QA/QC analyses and corrective actions.
- Preparing a report of the QA/QC activities that summarizes the findings, including a statement for inclusion in the CPT report executive summary regarding if any of the test data are invalid or unusable.

4.4 PROCESS SAMPLING COORDINATOR/SAMPLE CUSTODIAN

A Process Sampling Coordinator/Sample Custodian will be appointed who will have overall responsibility for the collection and handling of all test samples. As Process Sampling Coordinator, this person has the following responsibilities:

- Coordinating the preparation and shipment of process sampling equipment to the test site
- Directing and/or participating in process sampling activities
- Recording field test data required by the test plans or process sampling methods
- Reviewing and approving process sample collection sheets and field data sheets prepared by others
- Overseeing recovery of process samples and preservation of process samples in the field
- Documenting all required process samples are collected
- Performing all QA activities required by the process sampling methods
- Preparing a draft and final report of process sampling activities.

As the Sample Custodian, this person has the following responsibilities:

- Controlling issuance of sample containers at the test site
- Packaging the process and stack gas samples for shipment to the laboratory
- Preparing COC and RFA forms for all samples or reviewing the same test documentation prepared by other test team members
- Coordinating the shipping of all samples to the laboratory.
- Monitoring the shipment of samples to the laboratory to ensure that all samples are received on schedule and with all preservation requirements being met. Any discrepancies should be immediately reported to the QAO, Test Coordinator and Hexion Test Project Manager.

The Process Sampling Coordinator/Sample Custodian will be an employee of the stack sampling contractor or test management contractor.

4.5 SPIKING CONTRACTOR

The Spiking Contractor will have responsibility for the spiking the selected ash surrogate and metals to the waste feed during the CPT. The Spiking Contractor has the following responsibilities:

- Preparing and shipping the spiking equipment and materials to the test site
- Preparing and calibrating the spiking equipment
- Spiking the ash surrogate and metals to the waste feed in accordance with the CPT plan
- Recording spiking system operating data
- Notifying the Test Coordinator immediately of any difficulties or interruption of the spiking system operations
- Reducing spiking data and performing all calculations and QA activities required by the CPT plan and QAPP
- Preparing a draft and final report of spiking activities.

4.6 STACK SAMPLING TEAM LEADER

The Stack Sampling Team Leader will have overall responsibility for the collection and handling of all stack gas related samples. The Stack Sampling Team Leader has the following oversight responsibilities:

- Preparing and shipping stack sampling equipment, and shipping containers to the test site
- Preparing and calibrating stack sampling equipment
- Directing and/or participating in stack sampling activities
- Recording field test data required by the test plans and stack sampling methods
- Reviewing and approving stack sample collection sheets and stack sampling field data sheets
- Overseeing recovery of stack sampling-related samples and preservation of those samples
- Notifying the Sample Custodian of all samples collected

- Reducing stack sampling data and performing all calculations and QA activities required by the stack sampling methods
- Preparing a draft and final report of stack sampling activities.

4.7 HEXION PROCESS OPERATIONS

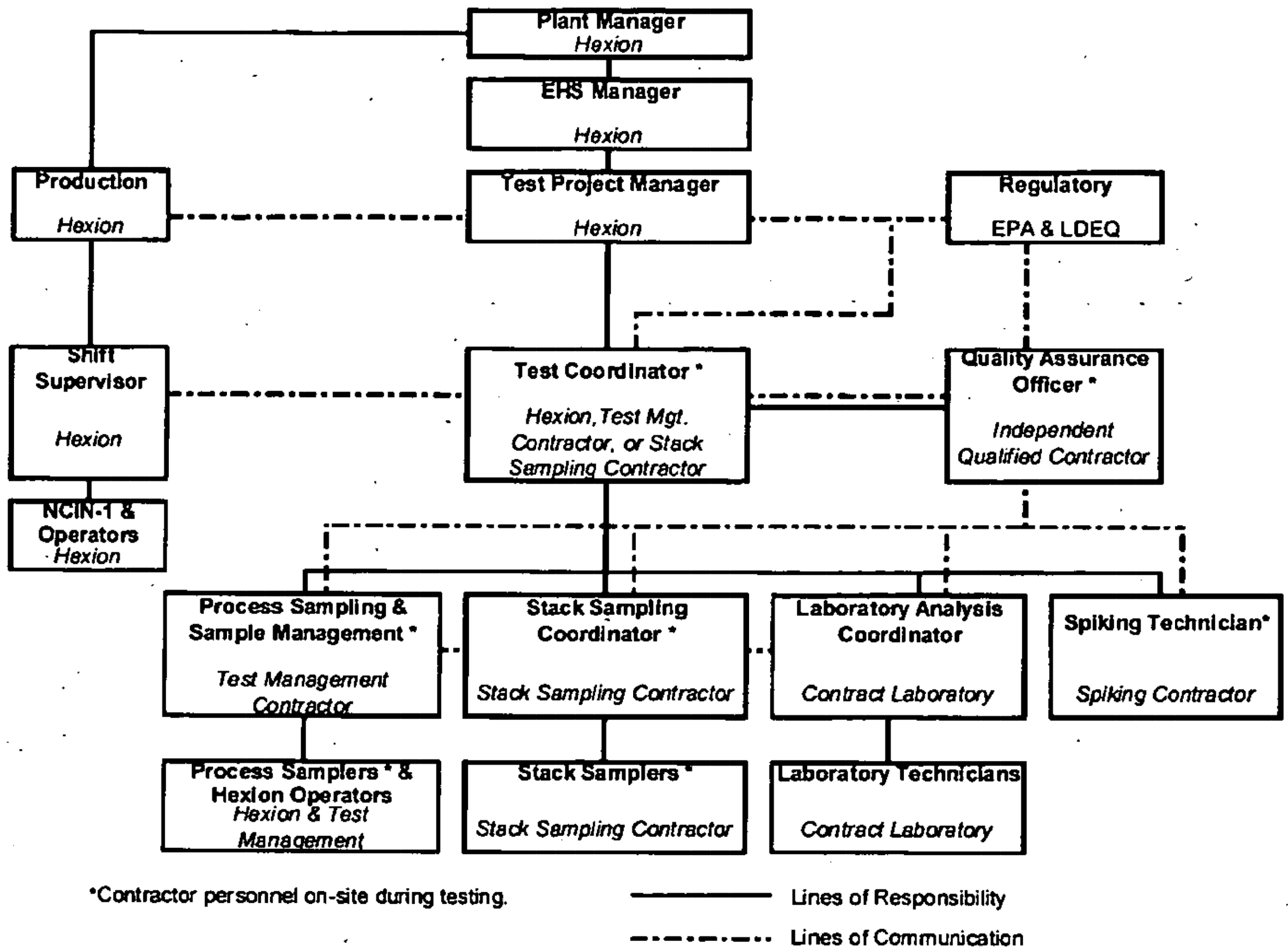
The Hexion Process Operations will be responsible for the operation of the incinerators. Their duties will include:

- Maintaining the incinerators within specified target limits
- Maintaining logs of process data as required
- Downloading and providing the NCIN-1 and NCIN-2 one-minute operating data to the Test Coordinator in Microsoft Excel or ASCII format
- Assisting in the collection of waste feed and other process samples
- Transferring to the Sample Custodian all process samples collected.

4.8 LABORATORY ANALYSIS COORDINATOR

The Laboratory Analysis Coordinator will have overall responsibility for the analysis of all process and stack gas related samples. The Laboratory Analysis Coordinator has the following responsibilities:

- Receiving, verifying, and documenting that incoming field samples correspond to the sample chain of custody information
- Notifying the Sample Custodian, QAO, Test Coordinator and Hexion Test Project Manager of any discrepancies or problems in the COC and RFA information, preservation, or sample condition
- Maintaining records of incoming samples
- Tracking samples through processing, analysis, and disposal
- Designating QC samples for analysis during the project
- Verifying that laboratory personnel are trained and qualified in specified laboratory QC and analytical procedures
- Verifying that laboratory QC and analytical procedures are being followed as specified in this QAPP, the laboratory specific QA/QC Plan, and the laboratory specific analytical standard operating procedures (SOPs)
- Reviewing QC and sample data during analysis and determining if repeat analyses are needed
- Submitting certified QC and sample analysis results and data packages to the Test Coordinator
- Notifying the QAO and Test Coordinator of any QC excursions during the preparation and analysis of the field samples or associated QC samples
- Archiving analytical data
- Preparing a statement of the analysis activities for inclusion in the CPT report executive summary regarding if any of the test data are invalid or unusable.



*Contractor personnel on-site during testing.

Figure 4-1. Hexion Test Project Organization and Responsibility